

REMARKS

Claims 1-4, 9-11 and 49 are presently pending in the application.

Claims 5-8, 31-48, 50 and 51 have been canceled without prejudice to the filing of one or more divisional applications directed to the subject matter thereof. Claims 1 and 4 have been amended to delete "compound comprising a" as suggested by the Examiner, and now recite "a calix[n]pyrrole macrocycle compound..." Claims 2 and 9-11 have been amended to recite "macrocycle compound" to correctly depend from the amended independent claims. Claim 49 has been amended to add a period at the end and to correct a typographical error in the structure of 48 and replace an "R" with an "F". Finally, claim 3 has been rewritten to more clearly describe the bridged structures which may be formed from the coupling of at least two odd-numbered R substituents with each other or from the coupling of at least two even-numbered R substituents with each other. An exemplary bridged structure formed from the coupling of two even-numbered R substituents is described in paragraphs [0387] – [0389] of the published patent application. No new matter has been added by these amendments, and entry is respectfully requested.

Priority

The Examiner argues that while Applicants claim priority to the parent application No. 09/838,998 under 35 U.S.C. § 120, the parent application fails to provide adequate support under 35 U.S.C. § 112 for claims 2, 4, 9-11 and 49. The Examiner argues that these claims, which recite that even numbered R groups are fluorine and specific n values, or claim specific fluorinated species of the calix[n]pyrrole macrocycle, lack written description in the parent application. The Examiner contends that the parent application only provides support for a broad genus of calix[n]pyrrole macrocycles in which R can be halide and n is 4-8. The Examiner concludes that the claimed invention of claims 2, 4, 9-11 and 49 is not for an invention which is also disclosed in the prior application. Applicants respectfully traverse this conclusion as follows.

Applicants respectfully submit that the present claims are indeed entitled to the benefit of the priority date of the parent application because the subject matter of the claims was described in the parent application and the Examiner's conclusion that the parent application does not support the compounds having a fluorine substituent is in error. The parent application, No. 09/838,998, filed April 20, 2001, is a divisional of U.S. Patent Application No. 08/833,379, filed

April 4, 1997, which issued as U.S. Patent No. 6,262,257. The '257 patent discloses compounds in which the R substituents defined by paragraph i) (col. 7, line 16-30) include halides. The halide substituents contemplated by the invention are expressly identified as "chloride, bromide, fluoride, and iodide" (col. 17, lines 54-56). In col. 10, lines 64-67, the fourth synthetic method for making β -substituted calix[n]pyrroles ($n=4, 5, 6, 7, 8$) comprises reacting β -substituted pyrrole with a ketone. A β -dihalo-substituted pyrrole may thus be used to prepare halogenated calix[n]pyrroles. The synthetic method used to make these materials is described at col. 24, lines 6-15.

Further, in col. 22, entry 14 of the Table is β -octabromo-meso-octamethylcalix[4]pyrrole (which reads on claim 2) and Example 10 of the parent application describes the attachment of electron-withdrawing substituents (such as bromine) to the carbon rim. Those skilled in the art will appreciate that such electron-withdrawing halide substituents also include fluoride and chloride. Indeed, the only halide generally not considered to be suitable as an electron-withdrawing substituent is iodide. (See, for example, col. 2, lines 43-45 of U.S. Patent No. 5,599,928 of Sessler (one of the Applicants of the present application), attached, which states that, "Electron-withdrawing groups include halide other than iodide...".) Applicants thus submit that no fair basis exists to presume that disclosure of halides in the parent application would be considered by one skilled in the art as limited to the specifically exemplified halide, bromide, and not to support fluoride. If anything, one skilled in the art might infer the exclusion of iodide as an electron-withdrawing group, but certainly not fluoride. Applicants thus respectfully submit that persons of ordinary skill in the art would appreciate that the parent application encompassed those compounds in which the halide was fluoride because of both the express disclosure of the same and the knowledge of one of skill in the art. Therefore, the present application is entitled to the benefit of the priority date for the subject matter of at least rejected claims 2, 4, 9-11 and 49.

The Examiner argues that "one cannot disclose a forest in the original application, and then later pick a tree out of the forest and say 'here is my invention.'... The blaze marks directing the skilled artisan to that tree must be in the originally filed disclosure." Applicants respectfully submit that since the parent patent clearly discloses halide substituents, describes the synthetic method by which such materials may be prepared, and specifically describes bromo-substituted compounds and teaches that appropriate halides may be fluoro, chloro, or bromo, Applicants have certainly provided the skilled artisan with the blaze marks directing the skilled artisan to the claimed fluorine-, chlorine-, or bromine-containing compounds.

Accordingly, Applicants are indeed entitled to the priority date of the parent application. Reconsideration and withdrawal of the determination that the presently claimed invention is not supported by the parent application are respectfully solicited.

Claim Objections

The Examiner has objected to claim 3 under 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of the previous claim. The Examiner argues that claim 3 states that at least two substituents are coupled to form a bridged structure wherein the two R substituents are selected from the group consisting of an odd numbered R and a pyrrole R. The Examiner argues that this fails to further limit the parent claim since the parent claim does not allow for the pyrrole groups to couple with the odd-numbered R groups because the pyrrole R groups are fluoro, chloro, or bromo or selected from ii) which is hydrogen, alkyl, aminoalkyl, alkylsulfone, carboxyalkyl, carboxyamidealkyl, phospho alkyl, alkyl sulfoxide, alkyl sulfone, alkyl sulfide, haloalkyl, aryl, N-oxide, dialkylamino, carbamate or arylsulfonyl, none of which allow the pyrrole groups to couple with the odd numbered R groups.

Claim 3 has been amended to recite that the bridged structure may be formed by two odd-numbered R substituents coupling together or by two even-numbered R substituents coupling together. For example, a bridged structure in which the even R-substituents are coupled together is described in paragraphs [0387] – [0389] of the patent application publication. It is now clear that bridged structures may not be formed via coupling of the pyrrole (even-numbered R) substituents with the odd-numbered R substituents.

The Examiner has also objected to claim 49 as lacking a period at the end of the sentence. A period has now been added. In view of these amendments, withdrawal of the objections is respectfully requested.

Rejections Under 35 U.S.C. § 112

The Examiner has rejected claims 1-4 and 9-11 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner argues that the term “comprising” in claims 1 and 4 makes the claims unclear as to what else is included in the compound. While not necessarily agreeing with the basis for the Examiner’s rejection, claims 1 and 4 have been amended to recite “A calix[n]pyrrole macrocycle compound having the structure I,” as suggested by the Examiner.

The Examiner has also rejected claim 49 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner argues that compound 48 in claim 49 has the variable R, which is undefined. "R" was a typographical error, and has been corrected to read "F." In view of these amendments, reconsideration and withdrawal of the formal rejections are respectfully requested.

Rejections Under § 102

Finally, the Examiner has rejected claims 2, 4, 9, 11 and 49 under 35 U.S.C. § 102(a) as being anticipated by Sessler et al. (Reference C 100 in the IDS) which allegedly discloses the compounds β -decafluoro-meso-octamethylcalix[5]pyrrole (compound 4 page 12061), β -hexadecafluoro-meso-octamethylcalix[8]pyrrole (compound 6 page 12061), and octafluorocalix[4]pyrrole (compound 2 page 12061). The Examiner has also rejected claims 2, 4, and 49 under 35 U.S.C. § 102(a) as being anticipated by Anzenbacher et al, which allegedly discloses the compound octafluorocalix[4]pyrrole (compound 2, page 10269).

Further, the Examiner has rejected claims 1-4, 9-11 and 49 under 35 U.S.C. § 102(f), arguing that the Applicants did not invent the claimed subject matter. The Examiner notes that the named inventors are Sessler, Anzenbacher, Marquez and Shriver, but that the Sessler Declaration filed July 31, 2003 states that "the subject matter of each of claims 1-11 and 31-51 was invented by me, Pavel Anzenbacher Jr., Manuel Marquez, and/or James Shriver." The Examiner argues that it is possible to interpret this phrase in several ways, and that the inventive entity named in the application may be incorrect. The Examiner notes that an inventor must contribute to the conception of the invention, and that the Sessler Declaration casts doubts on this. However, the Examiner notes that the § 102(a) and § 102(f) rejections can be overcome by submitting a new declaration under 37 C.F.R. § 1.132 which states what subject matter of each of the claims was invented by each of the four named inventors of the application.

Submitted herewith is a Second Declaration of Jonathan Sessler Under 37 C.F.R. § 1.132 ("Second Sessler Declaration"). As stated in paragraph 4 of the Second Sessler Declaration, "the subject matter of each of claims 1-11 and 31-51 was invented by me, Pavel Anzenbacher Jr., Manuel Marquez, and James Shriver." Thus, since each of the pending claims was invented by Sessler, Anzenbacher, Marquez and Shriver, it is submitted that the question of inventorship has been resolved, and reconsideration and withdrawal of the § 102(a) and § 102(f) rejections are respectfully requested.

In view of the preceding Amendments, Remarks, and Second Sessler Declaration, it is respectfully submitted that all of the pending claims are in compliance with § 112, patentably distinct over the prior art of record and in condition for allowance. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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(Date)

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Encl: Petition for Extension of Time (one month)
Second Declaration of Jonathan L. Sessler Under 37 C.F.R. 1.132
Cover page and col. 2 of U.S. Patent No. 5,599,928

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